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ABSTRACT

The Fishbein Model is an attitude behavior consistency model which is used in both laboratory and field settings for predicting and understanding attitudinal and normative influences on behavior. This paper examines controversy surrounding the Fishbein Model's normative component in the context of a study of library and information science (LIS) students' attitudes toward microcomputer use. Interviews were conducted with two groups of LIS students--one group learning to use a microcomputer and one group using a microcomputer--to determine their attitudes toward microcomputer use. Students' responses under educational and non-educational conditions were compared to identify areas where the action of learning influenced components of the model. The same eight normative referents were identified by both groups. Six were positive referents: library users, professors, future employers, people who use computers, family, and friends. Two were negative referents: people against technology and people threatened by computers. Bipolar measurement for subjective norms--i.e., the normative belief or referent and the motivation to comply--showed significant differences between the groups on three of the norms. The learning group felt motivated to comply by a particular positive referent, while the using group felt motivated not to comply by the negative referents. Noting that subjective norms are still problematic in using the Fishbein Model for predicting and understanding behavior, the model is recommended as a useful tool for examining normative influences and behavior in education if it is applied and interpreted appropriately. (10 references) (CGD)

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Predicting Behavior from Normative Influences:
What insights can the Fishbein Model offer?

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PREDICTING BEHAVIOR FROM NORMATIVE INFLUENCES:
What insights can the Fishbein Model offer?

The Fishbein Model is an attitude behavior consistency model based on a recursive causal chain structure which places normative influences in the middle of the chain: Acted upon by beliefs and in turn acting on behavioral intentions. The normative component is considered a major factor for influencing behavioral intentions along with an attitudinal component. This paper examines controversy surrounding the Fishbein Model's normative component. Results from a study of microcomputer use are presented and implications for educational research and practice are examined.

The Fishbein Model

The Fishbein Model is based on Fishbein and Ajzen's theory of reasoned action which presents progressive levels of specificity towards understanding the relationship between beliefs and behavior (See Fig. 1).

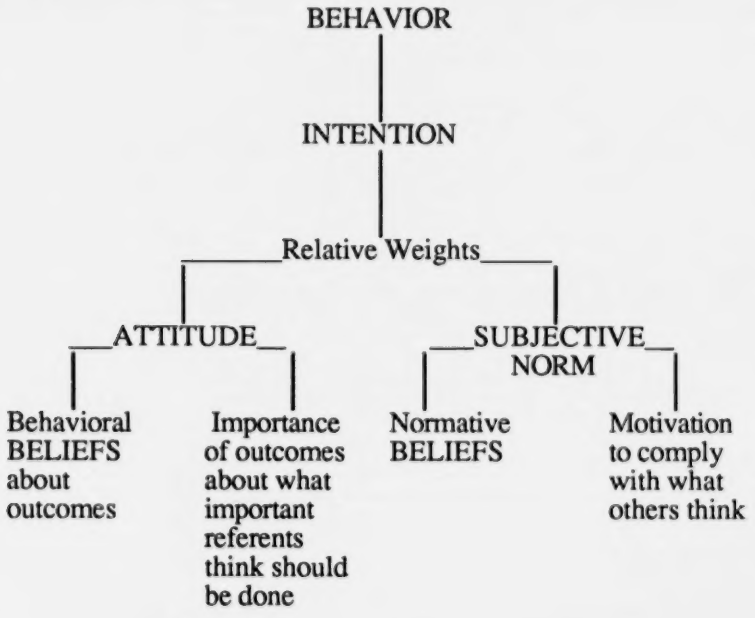

Fig. 1--Relationships beween components of the theory of reasoned action.

Attitudes and subjective norms are the predictors of behavioral intentions in the model. The weighting factors indicate their relative importance to the behavior under consideration. Cialdini, Petty and Cacioppo (1981) reported the normative concept caused more controversy than the attitude concept due to the varying nature of the component weights. Studies have found attitudes contributing more than subjective norms (Loken & Fishbein, 1980) and subjective norms contributing more than attitudes (Kantola, Syme & Campbell, 1982). In general, however, attitudes have been found to consistently contribute more to behavioral intentions (Cialdini et al, 1981).

Other objections to the normative component of the model are both methodological and rational (Miniard & Cohen, 1979, 1981). They focus on operational definitions of normative referents, unipolar vs bipolar measurement and specificity of behavioral domain. Fishbein and Azjen (1981) have countered criticisms rationally and empirically with refinements to normative measurement. In their view, unipolar measurement at the general level reflects the positive motivation to comply with people who are important to the individual. They do indicate scaling and specificity level may be related. Bipolar measurement may be useful if motivation to comply is specified at an intermediate rather than general level.

The Fishbein Model of behavioral intentions is used widely in both laboratory and field settings for predicting and understanding attitudinal and normative influences on behavior. One of the strengths of the model is its flexibility for behavior and population specific measurement. By using basic principles for creating questionnaires (Ajzen and Fishbein, 1980) results are directly based on beliefs of the target population. A sample of the population is interviewed to obtain the information which generates question construction. The study presented below used this method for examining library and information science (LIS) student's attitudes toward microcomputer use.

Normative Influences on LIS students' microcomputer use

Four criteria of specificity are involved in applying the Fishbein Model to understanding and predicting behavior: Target, action, context and time. The study this paper is based on (Walster, 1986) applied the complete Fishbein Model to two behaviors which differed only in their action elements: learning to use a microcomputer and using a microcomputer. Comparing student's responses under educational and non-educational conditions resulted in identification of areas where the action of learning influenced components of the model.

For purposes of this discussion only the normative implications of the study will be considered. Based on the problems with the normative component found in the literature, two issues are examined. The first is the type of referent: who were important normative influences and what were their characteristics?. The second is a measurement issue: What affect does unipolar or bipolar scaling have?

Normative Referents

The same eight normative referents were identified in interviews by the learning to use microcomputers and the using microcomputers groups as salient. Six were positive referents: Library users, professors, future employers, people who use computers, family and friends. Two were negative referents: People against technology and people threatened by computers. Comparing the groups' responses to these eight referents, significant differences were found for only one normative referent (See Table 1). Students in the learning group felt it was significantly more likely professors would be in favor of their learning to use a microcomputer.

Table 1. T values and means for normative beliefs (normative referents).

Referents	Group	n	M	SD	df	t
Professors	Learning	36	2.53	0.56		
	Using	32	1.97	0.97	66	2.96*
Future employers	Learning	36	2.39	0.77		
	Using	32	2.03	0.93	66	1.73
People using computers	Learning	36	2.25	0.99		
	Using	32	2.00	0.98	66	1.04
Friends	Learning	36	1.06	1.04		
	Using	32	0.84	0.99	66	0.86
Family	Learning	36	1.19	1.19		
	Using	32	1.00	0.98	66	0.73
Library users	Learning	36	0.89	1.19		
	Using	32	0.83	1.17	66	0.16
People against technology	Learning	36	-1.14	1.53		
	Using	32	-1.47	1.30	66	0.95
People who feel threatened by technology	Learning	35	-1.06	1.39		
	Using	32	-1.34	1.29	65	0.87

*p<.01

Both groups believed professors, people who use computers and future employers were most likely to be in favor of microcomputer use. Family and friends were judged by the groups to be only slightly likely to favor microcomputer use. People against technology and people who feel threatened by technology were thought to be unlikely to favor microcomputer use. These judgments are what the students believed the various referent groups would like them to do.

Miniard and Cohen (1981) stated that some referents will be positive and some referents will be negative. The Fishbein Model, however, assumes that only positive referents will be influential. This study resulted in positive and negative normative referents being salient to both groups. Negative referents need to be considered in predicting and understanding attitudes and behavior.

Responses to referents were different between the two groups. The learning group felt more strongly about the positive referents and less strongly about negative referents. The reverse was true for the using group. The learning action influenced responses to positive and negative referents.

Study of the affect of normative referents in the learning action could be useful for the design of instruction. In general, LIS education emphasizes service to the library user. This study clearly indicated library users were of minimal importance to student's microcomputer use. The future employer, however, was a strong normative concern to students. Instruction could be designed to increase student's motivation through greater consideration of employer concerns.

Motivation to Comply

Subjective norms consist of two parts: the normative belief (or normative referent) and the motivation to comply. The subjective norm is calculated by multiplying normative belief times motivation to comply. The controversy over unipolar or bipolar measurement relates specifically to motivation to comply. In this study both the learning group and the using groups' subjective norms were calculated with unipolar and bipolar scales.

Using bipolar measurement for subjective norms no significant differences were found (See Table 2). The sum of subjective norms also showed no significant differences between the groups (See Table 4). Six subjective norms resulted in positive normative beliefs and positive motivations to comply: library users, professors, future employers, people who use computers, family and

friends. Two subjective norms resulted in negative normative beliefs and negative motivations to comply: people against technology and people who feel threatened by technology.

Table 2. T values and means for estimates of subjective norms using bipolar motivation to comply

Referents	Group	n	M	SD	df	t
Professors	Learning	36	3.61	3.43		
	Using	32	2.50	2.37	66	1.53
Future employees	Learning	36	4.44	3.44		
	Using	32	3.78	2.60	66	0.89
People who use computers	Learning	36	0.67	3.41		
	Using	32	-0.19	2.31	66	1.19
Friends	Learning	36	0.86	1.18		
	Using	32	0.31	1.55	66	1.33
Family	Learning	36	1.47	2.17		
	Using	32	1.93	2.01	66	0.87
Library users	Learning	36	0.72	2.46		
	Using	32	0.53	1.84	66	0.18
People against technology	Learning	36	2.25	4.08		
	Using	32	1.59	2.59	66	0.78
People who feel threatened by technology	Learning	35	2.42	3.53		
	Using	32	1.47	2.55	65	1.25

When unipolar measurement was used there were significant differences between the groups on three subjective norms (See Table 3): professors, people against technology and people who feel threatened by technology. The learning group was significantly more likely to believe that they would be influenced by what their professors wanted them to do. With people against technology and people who feel threatened by technology the using group was significantly more likely to be motivated not to comply.

Table 3. T values and means for estimates of subjective norms using unipolar motivation to comply

Referents	Group	n	M	SD	df	t
Professors	Learning	36	13.72	4.99		
	Using	32	10.38	5.66	66	2.59*
Future employers	Learning	36	14.00	5.91		
	Using	32	11.91	5.95	66	1.45
People who use computers	Learning	36	9.67	5.07		
	Using	32	7.81	4.34	66	1.61
Friends	Learning	36	5.08	4.35		
	Using	32	3.69	4.35	66	1.18
Family	Learning	36	6.25	6.44		
	Using	32	5.03	5.37	66	0.84
Library users	Learning	36	4.28	5.79		
	Using	32	4.00	5.35	66	0.20
People against technology	Learning	36	-2.36	3.79		
	Using	32	-4.28	4.31	66	2.01*
People who feel threatened by technology	Learning	35	-1.74	3.24		
	Using	32	-3.91	4.25	65	2.33*
						*p<.05

The sum of all normative beliefs times motivations to comply using unipolar scaling also showed significant differences between the two groups (See Table 4). The learning group was significantly more likely to comply with normative referents.

Table 4. T values and means for sums of all subjective norms.

Subjective Norm	Group	n	M	SD	df	t
Bipolar	Learning	36	16.44	15.35		
	Using	32	11.13	9.04	66	1.71
Unipolar	Learning	36	49.00	22.69		
	Using	32	34.63	23.18	66	2.58*

*p<.05

In this study more significant differences resulted when the measurement was unipolar. The implications of these results are unclear. Other researchers have found significant correlations with normative beliefs and motivations to comply measured bipolarly (Hom, 1979), with both measured unipolarly (Davidson & Jaccard, 1979) and with normative beliefs measured bipolarly and motivation to comply measure unipolarly (Fishbein & Ajzen, 1981). The controversy in this area is strong and unresolved. Fishbein and Ajzen's (1981) recommendations are to use unipolar measurement for motivations at the general level and bipolar measurement for motivations at the behavioral domain level.

Subjective norms are still problematic in using the Fishbein Model for predicting and understanding behavior. In this study students in the learning to use microcomputers group tended to be more strongly motivated to comply. One possible interpretation would be the action of learning created a need to comply. The controversy surrounding the motivation to comply construct, however, reduces the ability to make generalizations. It is an issue which requires further investigation. Researchers in education need to be aware of the problems. Clear definition of behavioral domains and measurement techniques is critical to understanding normative influences when using the Fishbein Model.

Recommendations for Applying the Fishbein Model

Applying the Fishbein Model in educational contexts has advantages and disadvantages. Characteristics of the normative referents and measurement issues affect both prediction and understanding. Normative referents positive or negative characteristics should be evaluated when constructing questionnaires and analyzing responses. Measurement scales for motivation to comply need to consider specificity of domain level and context. The Fishbein Model can be a useful tool for examining normative influences and behavior in education if it is applied and interpreted appropriately.

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